

Attorney Docket No. P67341US0
Serial No.: 09/926,589

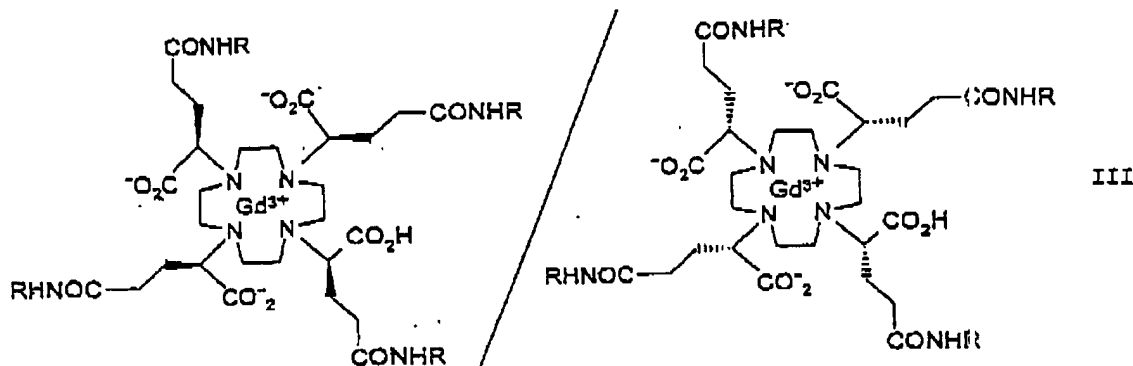
Amendments to the claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

Claims 1-16 (cancelled)

17. (new) Contrast agent for medical imaging, characterized in that it comprises a racemic compound of formula III



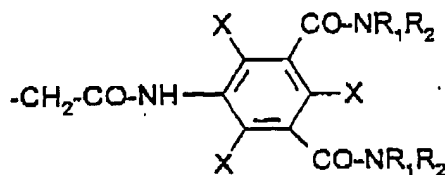
in which R is a phenyl group or a linear, branched or cyclic (C_1-C_8) alkyl group which are substituted or interrupted by one or more groups selected from the group consisting of phenyl, alkyl, oxy, amino and amido groups, which may or may not be substituted by alkyl,

it is being possible for the phenyl groups also to be substituted by one or more groups selected from the group selected from OH, Br, Cl, I, (C_1-C_8) alkyl, (C_1-C_8) alkyleneoxy, NO_2 , NR_xR_y , NR_xCOR_y , $CONR_xR_y$ and $COOR_x$, R_x and R_y being (C_1-C_8) alkyl or H, and it being possible for the linear or branched or cyclic alkyl groups to be hydroxylated,

and the salts of this acid with a physiologically acceptable inorganic or organic base.

18. (new) Contrast agent according to Claim 17, for which R is a group of formula

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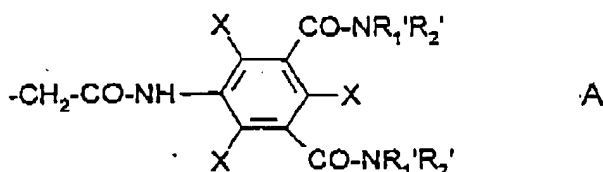
in which

X is Br or I,

R₁ is H, (C₁-C₃) alkyl, or (C₂-C₈) mono- or polyhydroxyalkyl,

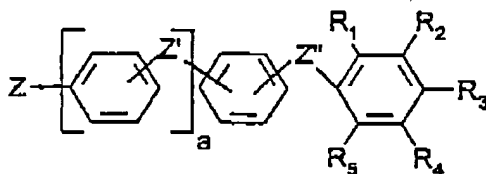
when R₁ is (C₁-C₃) alkyl or (C₂-C₈) mono- or polyhydroxyalkyl, R₂ is (C₂-C₈) mono- or polyhydroxyalkyl, and

when R₁ is H, R₂ is (C₂-C₈) mono- or polyhydroxyalkyl or a group of formula A



X being as defined above and R₁' and R₂' taking any one of the meaning given for R₁ and R₂, with the exception of A, it being understood that -CO-NR₁R₂ or -CO-NR₁'R₂' comprise at least two hydroxyl groups, and its salts with a physiologically acceptable inorganic or organic base.

19. (new) Contrast agent according to Claim 17, in which R is a group of formula



in which a is 1 or 2,

Z is an optional moiety selected from the group consisting of CH₂, CH₂CONH and (CH₂)₂NHCO,

Z' is an optional moiety selected from the group consisting of O, S, NQ, CH₂, CO, CO-NQ, NQ-CO, NQ-CO-NQ and CO-NQ-CH₂-CONQ,

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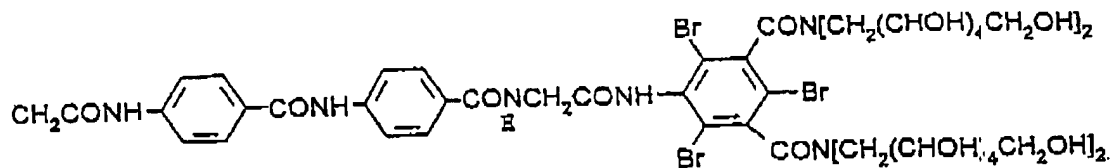
Z" is selected from the group consisting of CO-NQ, NQ-CO, CO-NQ-CH₂-CO-NQ and NQ-CO-CH₂-NQ-CO,

with Q being H or an optionally hydroxylated (C₁-C₄) alkyl group,

R₁, R₂, R₃, R₄ and R₅, independently of one another, are selected from the group consisting of H, Br, Cl, I, CO-NQ₁NQ₂ or N(Q₁)-CO-Q₂, and Q₁ and Q₂, which are identical or different, are selected from the group consisting of optionally hydroxylated (C₂-C₆) alkyl groups optionally interrupted by an oxygen atom, so that Q₁ and Q₂ together comprise from 4 to 10 OH groups,

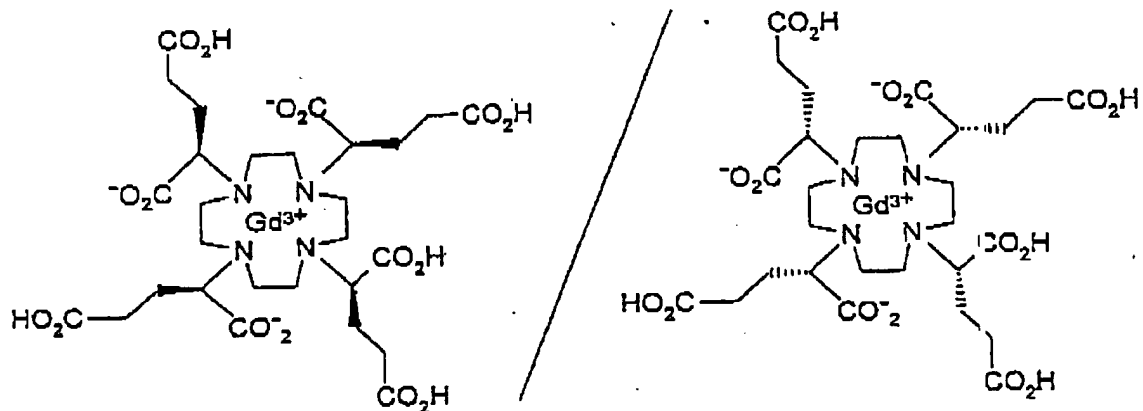
it being understood that at least 1 and at most 2 R₁, R₂, R₃, R₄ and R₅ groups are amide groups.

20. (new) Contrast agent according to Claim 19, in which R is a group of formula



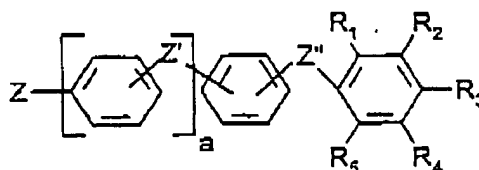
21. (new) Process for the preparation of the racemic compound of claim 17 which consists:
- in keeping an aqueous solution of the mixture of the stereoisomers of the gadolinium complex of 1, 4, 7, 10-tetraazacyclododecane-1,4,7,10-tetra(2-glutaric acid), with a pH of between 2 and 4.5, at a temperature of greater than 70 °C for a few hours to a few days, so as to obtain the racemic mixture of octaacids of formula:

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- in reacting this mixture with the same amine RNH_2 , with an agent which activates the acid functional group.

22. (new) Process according to claim 21, in which the solution of complexed octaacid is maintained at its reflux temperature for 35 to 45 hours at pH 3.
23. (new) Racemic compound of claim 17, for which R is a group of formula:



in which a is 1 or 2,

Z is an optional moiety selected from the group consisting of CH_3 , CH_2CONH and $(\text{CH}_2)_2\text{NHCO}$,

Z' is an optional moiety selected from the group consisting of O, S, NQ, CH_2 , CO, CO-NQ, NQ-CO, NQ-CO-NQ and CO-NQ- CH_2 -CONQ,

Z'' is selected from the group consisting of a bond CO-NQ, NQ-CO, CO-NQ, CH_2 -CO-NQ and NQ-CO- CH_2 -NQ-CO, with Q being H or an optionally hydroxylated (C_1 - C_4) alkyl group,

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R_1 , R_2 , R_3 , R_4 and R_5 , independently of one another, are selected from the group consisting of H, Br, Cl, I, CO-NQ₁Q₂ and N(Q₁)-CO-Q₂, and Q₁ and Q₂, which are identical or different, are selected from optionally hydroxylated (C₂-C₆) alkyl groups optionally interrupted by an oxygen atom, so that Q₁ and Q₂ together comprise from 4 to 10 OH groups, it being understood that at least 1 and at most 2 R_1 , R_2 , R_3 , R_4 and R_5 groups are amide groups.

24. (new) Racemic compound according to claim 23, in which R is a group of formula

